



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
www.uspto.gov

| APPLICATION NO.  | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO.                  | CONFIRMATION NO. |
|--|-------------|----------------------|--------------------------------------|------------------|
| 10/611,917   | 07/03/2003  | Shabbir Bambot       | SPRX-021C1                           | 5602             |
| 7590 10/29/2004  |             |                      |                                      |                  |
| FLESHNER & KIM, LLP<br>P.O. Box 221200<br>Chantilly, VA 20153-1200 |             |                      | EXAMINER<br>STAFIRA, MICHAEL PATRICK |                  |
|  |             |                      | ART UNIT<br>2877                     | PAPER NUMBER     |

DATE MAILED: 10/29/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

## Office Action Summary

Application No.

10/611,917

Applicant(s)

BAMBOT ET AL.

Examiner

Michael P. Stafira

Art Unit

2877

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on amendment filed 8/5/2004.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 24-49 is/are pending in the application.
- 4a) Of the above claim(s) 1-23 is/are withdrawn from consideration.
- 5) ☒ Claim(s) 24-39 and 44-49 is/are allowed.
- 6) ☒ Claim(s) 40, 42 and 43 is/are rejected.
- 7) ☒ Claim(s) 41 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- ☐ Notice of References Cited (PTO-892)
- ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_
- ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_
- ☐ Notice of Informal Patent Application (PTO-152)
- ☐ Other: \_\_\_\_\_

## DETAILED ACTION

### *Claim Rejections - 35 USC § 103*

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claims 40, 42-43 are rejected under 35 U.S.C. 103(a) as being unpatentable over Sato ('462) in view of Winston ('210).

#### **Claim 40**

Sato ('462) discloses an outer housing (Fig. 3, Ref. 5), a means for determining the characteristics of a target material at a plurality of interrogation positions (See Abstract), and means for holding the determining means in a plurality of predetermined positions relative to the outer housing (Fig. 3, Ref. 14).

Sato ('462) substantially teaches the claimed invention except that it does not show a means for rotating and holding the determining means in a plurality of predetermined positions relative to the housing. Winston ('210) shows that it is known to provide a means for rotating a plurality of fibers at predetermined positions relative to a housing (See Fig. 25) for an optical housing. It would have been obvious to combine the device of Sato ('462) with the inner rotating housing of Winston ('210) for the purpose of providing increased flexibility of the optical fibers, therefore increasing the accuracy of the placement of the view area.

**Claim 42**

Sato ('462) discloses the claimed invention except for a predetermined pattern of interrogation devices to minimize cross-talk. It would have been obvious to one having ordinary skill in the art at the time the invention was made to combine Sato ('462) with interrogation pattern since it was well known in the art that placing fibers in a pattern increase the area by providing a uniform illumination and receiving therefore increasing the sensitivity of the measurement.

**Claim 43**

Sato ('462) substantially teaches the claimed invention except that it does not show a interrogation locations are evenly distributed across the end cap. Winston ('210) shows that it is known to provide an end cap with fibers distributed across it (Fig. 22, at the end of ref. 30a, no ref. number for cap) for an optical probe apparatus. It would have been obvious to combine the device of Sato with the end cap of Winston for the purpose of providing protection to the optical fibers, therefore decreasing the amount of damage and preventing downtime for maintenance.

***Allowable Subject Matter***

3. Claims 24-39, 44-49 are allowed over the prior art of record.
4. Claim 41 is objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.
5. The following is a statement of reasons for the indication of allowable subject matter:

Art Unit: 2877

Regarding claim 24, the prior art fails to disclose or make obvious an instrument for precisely determining characteristics of a target material having a mechanism attached wherein the mechanism is configured to allow the inner core to be rotated relative the outer housing between a plurality of precisely predetermined rotational positions relative to the outer housing to position said array at a plurality of generally adjacent locations, so that measurements can be taken sequentially through said fibers at generally adjacent locations while minimizing cross between fibers in said array, and in combination with the other recited limitations of claim 24. Claims 25-39 are allowed by the virtue of dependency on the allowed claim 24.

Regarding claim 44, the prior art fails to disclose or make obvious a method of detecting characteristics of a target material having the steps of sequentially repositioning the plurality of interrogation devices so that they are adjacent at least one additional plurality of interrogation positions on the target material, wherein the first and at least one additional plurality of positions are not coincident but are sufficiently close that, if interrogated simultaneously would experience cross-talk there between; and detecting characteristics of the target material at the at least one additional plurality of interrogation positions, and in combination with the other recited limitations of claim 44. Claims 45-49 are allowed by the virtue of dependency on the allowed claim 44.

### ***Response to Arguments***

6. Applicant's arguments with respect to claims 40, 42-43 have been considered but are moot in view of the new ground(s) of rejection.

***Conclusion***

7. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

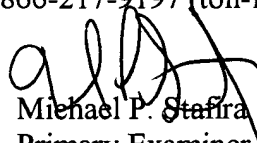
A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Michael P. Stafira whose telephone number is 571-272-2430. The examiner can normally be reached on 4/10 Schedule Mon.-Thurs..

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Gregory Toatley can be reached on 571-272-2800 ext. 77. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Art Unit: 2877

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

  
Michael P. Staffra  
Primary Examiner  
Art Unit 2877

October 20, 2004